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HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
P.O. Box 272400  
Fort Collins, CO 80527-2400

EXAMINER
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BRUCKART, BENJAMIN R

ART UNIT	PAPER NUMBER
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2155

DATE MAILED: 04/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center"><b>Office Action Summary</b></p>	<b>Application No.</b> 10/781,108	<b>Applicant(s)</b> BROWN ET AL.	
	<b>Examiner</b> Benjamin R. Bruckart	<b>Art Unit</b> 2155	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 February 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 and 7-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

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|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)<br>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)<br>3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____. | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____.<br>5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)<br>6) <input type="checkbox"/> Other: _____. |
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**Detailed Action**

Claims 1-5, 7-25 are pending in this Office Action.

Claim 6 remains cancelled.

Claims 1, 3-5, 7-11, and 17 are amended.

Claims 23-25 are new.

**Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1, 7-10, 17-22, 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable by U.S. Patent No. 5,887,164 by Gupta in view of U.S. Patent No. 5,974,547 by Klimenko.**

Regarding claim 1, the Gupta reference teaches a system comprising:

a processor (Gupta: col. 2, lines 57);

a memory coupled to the processor (Gupta: col. 2, 57); and

a bridge device coupling a system bus to the processor (Gupta: Figure 1), the system bus configured to couple to an expansion bus of a managed computer system (Gupta: col. 2, lines 57-60);

wherein the memory is configured to hold a bootable image for the managed computer system (Gupta: col. 5, lines 5-19), and wherein the processor is configured to emulate a disk drive device storing the bootable image (Gupta: col. 5, lines 5-19), and to boot the managed computer system from the bootable image stored in the memory (Gupta: col. 5, lines 5-19).

The Gupta reference fails to teach storing the bootable image in random access memory.

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However, the Klimenko reference teaches a managed computer system comprising a disk drive (Klimenko: col. 8, lines 59- col. 9, line 11) and random access memory to store the bootable image data (Klimenko: col. 11, lines 67- col. 12, line 4) for temporary data and instruction store (Klimenko: col. 8, lines 64) and provide cost savings (Klimenko: col. 3, lines 44-46).

It would have been obvious at the time of the invention to one of ordinary skill in the art to create the system as taught by Gupta to include a disk drive and storing the bootable image in RAM as taught by Klimenko in order to store temporary data and instructions and provide cost savings.

Regarding claim 7, the Gupta reference teaches the system as defined in claim 1. The Gupta reference does not explicitly state a bootable image transferred to the RAM. However the Klimenko reference teaches a network interface coupled to the RAM by the system bus (Klimenko: col. 4, lines 18-25); wherein the bootable image is transferable to the RAM through the network interface (Klimenko: col. 11, lines 67- col. 12, line 4) for temporary data and instruction store (Klimenko: col. 8, lines 64) and provide cost savings (Klimenko: col. 3, lines 44-46).

It would have been obvious at the time of the invention to one of ordinary skill in the art to create the system as taught by Gupta to include a disk drive and storing the bootable image in RAM as taught by Klimenko in order to store temporary data and instructions and provide cost savings.

Regarding claim 8, the Gupta reference teaches the system as defined in claims 7. The Gupta reference does not explicitly state a remote management console.

However, the Klimenko reference teaches bootable image is transferable to the RAM through the network interface from a remote management console (Klimenko: col. 8, lines 13-32) in order to reduce complexity of cost for reliable emulation of booting from servers (Klimenko: col. 1, lines 41-67; col. 3, lines 31-55).

It would have been obvious at the time of the invention to one of ordinary skill in the art to create the system of a processor with memory coupled to a managed computer system as

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taught by Gupta to include a remote management console as taught by Klimenko in order to reduce the cost of administration (Klimenko: col. 1, lines 41-67; col. 3, lines 31-55).

Regarding claim 9, the Gupta reference teaches the system as defined in claim 7. The Gupta reference fails to teach the bootable image is transferable to RAM. However, the Klimenko reference teaches wherein the bootable image is transferable to the RAM through the network interface using file transfer protocol (FTP) software (Klimenko: col. 7, lines 35, 36; col. 11, lines 67-col. 12, line 4) in order to reduce complexity of cost for reliable emulation of booting from servers (Klimenko: col. 1, lines 41-67; col. 3, lines 31-55).

It would have been obvious at the time of the invention to one of ordinary skill in the art to create the system of a processor with memory coupled to a managed computer system as taught by Gupta to include a remote management console as taught by Klimenko in order to reduce the cost of administration (Klimenko: col. 1, lines 41-67; col. 3, lines 31-55).

Regarding claim 10, the Gupta reference teaches the system as defined in claim 7. The Gupta reference fails to teach a bootable image is transferable to RAM. However, the Klimenko reference teaches wherein the bootable image is transferable to the RAM through the network interface using TFTP software (Klimenko: col. 7, lines 35, 36; col. 11, lines 67-col. 12, line 4) in order to reduce complexity of cost for reliable emulation of booting from servers (Klimenko: col. 1, lines 41-67; col. 3, lines 31-55).

It would have been obvious at the time of the invention to one of ordinary skill in the art to create the system of a processor with memory coupled to a managed computer system as taught by Gupta to include a remote management console as taught by Klimenko in order to reduce the cost of administration (Klimenko: col. 1, lines 41-67; col. 3, lines 31-55).

Regarding claim 17, the Gupta reference teaches a management sub-system (Gupta: host computer) comprising:

a processor (Gupta: col. 2, lines 57);

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a memory coupled to the processor (Gupta: col. 2, lines 57), the memory storing a bootable image for a managed computer system comprising a disk drive and an expansion bus (Gupta: col. 4, lines 52-58; col. 5, lines 5-19); and

a bridge device coupling a system bus to the processor (Gupta: Figure 1), and wherein the system bus is configured to couple to the expansion bus of the managed computer system (Gupta: col. 5, lines 36-57; managed computer system = target computer);

wherein the processor is configured to emulate a disk drive device storing the bootable image (Gupta: col. 4, lines 5-19), and the processor is further configured to boot the managed computer system from the bootable image stored in the memory (Gupta: col. 5, lines 5-19);

Regarding claim 18, the management sub-system as defined in claim 17 further comprising: a network interface coupled to the memory by the system bus (Gupta: col. 5, lines 20-26; col. 6, lines 11-23); wherein the bootable image is transferable to the memory through the network interface (Gupta: col. 7, lines 20-39).

Regarding claim 19, The Gupta reference teaches the management sub-system as defined in claim 18. The Gupta reference does not explicitly state a remote management console.

However, the Klimenko reference teaches transferring a bootable image to the memory at the behest of a remote management console (Klimenko: col. 8, lines 13-32; col. 12, lines 13-21) in order to reduce complexity of cost for reliable emulation of booting from servers (Klimenko: col. 1, lines 41-67; col. 3, lines 31-55).

It would have been obvious at the time of the invention to one of ordinary skill in the art to create the system of a processor with memory coupled to a managed computer system as taught by Gupta to include a remote management console as taught by Klimenko in order to reduce the cost of administration (Klimenko: col. 1, lines 41-67; col. 3, lines 31-55).

Regarding claim 20, the Gupta reference teaches the management sub-system as defined in claim 18. The Gupta reference fails to teach transferred by TFTP software.

However the Klimenko reference teaches wherein the bootable image is transferred to the memory through the network interface using TFTP software (Klimenko: col. 7, lines 35, 36) in

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order to reduce complexity of cost for reliable emulation of booting from servers (Klimenko: col. 1, lines 41-67; col. 3, lines 31-55).

It would have been obvious at the time of the invention to one of ordinary skill in the art to create the system of a processor with memory coupled to a managed computer system as taught by Gupta to include a remote management console as taught by Klimenko in order to reduce the cost of administration (Klimenko: col. 1, lines 41-67; col. 3, lines 31-55).

Regarding claim 21, the Gupta reference teaches the management sub-system as defined in claim 17 wherein a processor, memory and network interface are mounted on an add-in card. The Gupta reference fails to teach the add in card inside the chassis of the managed computer. The Gupta reference shows that the add in card can be inserted into a system for direct connection to an I/O bus. It would have been obvious at the time of the invention to one of ordinary skill in the art to include an add in card with processor, memory and network interface into the chassis of a managed computer system in order to directly connect the two systems (Gupta: col. 5, lines 35-62).

Regarding claim 22, the management sub-system as defined in claim 17 wherein the system bus is a Peripheral Components Interconnect (PCI) bus (Gupta: col. 5, lines 42-58).

Regarding claim 24, the system as defined in claim 1, wherein the system bus and the expansion bus of the managed computer system utilize the same bus protocol (Gupta: col. 5, lines 44-57).

Regarding claim 25, the system as defined in claim 24, wherein the bus protocol is a peripheral component interconnect (PCI) bus (Gupta: col. 5, lines 44).

**Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable by U.S. Patent No. 5,887,164 by Gupta in view of U.S. Patent No. 5,974,547 by Klimenko in further view of U.S. Patent No. 6,205,547 by Davis.**

Regarding claim 2, the Gupta and Klimenko references teach the system as defined in claim 1.

The Gupta and Klimenko references fail to teach a processor determining a source of errors.

However, the Davis reference teaches a processor is configured to determine a source of an error in the managed computer system by accessing components of the managed computer system over the system bus (Davis: col. 4, lines 16-27; col. 3, lines 56-59) in order to regulate behavior of the computer system by determining and modify the state of the components (Davis: col. 4, lines 63-65).

It would have been obvious at the time of the invention to one of ordinary skill in the art to create the system of a processor with memory coupled to a managed computer system as taught by Gupta, Klimenko while to include a system management controller as taught by Davis in order to regulate the behavior of the managed computer system by monitoring, controlling, and reporting state information (Davis: col. 4, lines 63-65).

Regarding claim 3, the Gupta and Klimenko references teach the system as defined in claim 1. Gupta, Klimenko fail to teach storing information related to the state of the computer. However, the Davis reference teaches wherein the processor is configured to store information related to a state of the managed computer system in the RAM (Davis: col. 4, lines 21; log file; col. 5, lines 20-35; col. 3, lines 39-51) in order to regulate behavior of the computer system by determining and modify the state of the components (Davis: col. 4, lines 63-65).

It would have been obvious at the time of the invention to one of ordinary skill in the art to create the system of a processor with memory coupled to a managed computer system as taught by Gupta, Klimenko while to include a system management controller as taught by Davis in order to regulate the behavior of the managed computer system by monitoring, controlling, and reporting state information (Davis: col. 4, lines 63-65).

Regarding claim 4, the Gupta, Klimenko reference teach the system as defined in claim 3. Gupta, Klimenko fail to teach storing diagnostic information in RAM. However, the Davis reference teaches wherein the processor is configured to store diagnostic information about the managed computer system in the RAM (Davis: col. 4, lines 21; log file; col. 5, lines 20-35; col. 3, lines 39-



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51) in order to regulate behavior of the computer system by determining and modify the state of the components (Davis: col. 4, lines 63-65).

It would have been obvious at the time of the invention to one of ordinary skill in the art to create the system of a processor with memory coupled to a managed computer system as taught by Gupta, Klimenko while to include a system management controller as taught by Davis in order to regulate the behavior of the managed computer system by monitoring, controlling, and reporting state information (Davis: col. 4, lines 63-65).

Regarding claim 5, the Gupta, Klimenko reference teach the system as defined in claim 3. The Gupta, Klimenko references fail to teach storing event log information in RAM. However, the Davis reference teaches wherein the processor is configured to store event log information about the managed computer system in the RAM (Davis: col. 4, lines 21; log file; col. 5, lines 20-35; col. 3, lines 39-51) in order to regulate behavior of the computer system by determining and modify the state of the components (Davis: col. 4, lines 63-65).

It would have been obvious at the time of the invention to one of ordinary skill in the art to create the system of a processor with memory coupled to a managed computer system as taught by Gupta, Klimenko while to include a system management controller as taught by Davis in order to regulate the behavior of the managed computer system by monitoring, controlling, and reporting state information (Davis: col. 4, lines 63-65).

**Claims 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable by U.S. Patent No. 5,974,547 by Klimenko in further view of U.S. Patent No. 6,658,563 by Ice et al.**

Regarding claim 11, the Klimenko reference teaches a method comprising:

transferring a bootable image for a managed computer system to a memory of a management sub-system within the managed computer system (Klimenko: col. 11, lines 25-30, lines 66- col. 12, line 4); and

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emulating a drive by the management sub-system to boot the managed computer system from the bootable image in the memory of the management sub-system (Klimenko: col. 12, lines 4-20).

The Klimenko reference fails to teach emulating a floppy drive.

However, the Ice reference teaches emulating a virtual floppy drive from memory (Ice: col. 3, lines 34-42) in order to boot the computer from a floppy drive without changing the native OS and file system (Ice: col. 2, lines 17-28, 41-46).

It would have been obvious to one of ordinary skill in the art at the time of the invention to create the method as taught by Klimenko to include the emulation of a floppy drive as taught by Ice in order to boot the computer from the floppy drive leaving the native OS and file system unchanged.

Regarding claim 12, the method as defined in claim 11 further comprising: transferring a bootable image to the memory at the behest of a remote management console (Klimenko: col. 8, lines 13-32; col. 12, lines 13-21).

Regarding claim 13, the method as defined in claim 12 further comprising transferring the bootable image to the memory from the remote management console (Klimenko: col. 8, lines 13-32; col. 12, lines 13-21).

Regarding claim 14, the method as defined in claim 12 further comprising transferring the bootable image through a network interface coupled to the management sub-system using a File Transfer Protocol (FTP) software (Klimenko: col. 7, lines 35, 36).

Regarding claim 15, the method as defined in claim 12 further comprising transferring the bootable image through a network interface coupled to the management sub-system using TFTP software (Klimenko: col. 7, lines 35, 36).

Regarding claim 16, The Klimenko reference teaches the method as defined in claim 11. The Klimenko reference fails to teach rebooting the managed computer system prior to emulating.

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However, the Ice reference teaches further comprising rebooting the managed computer system, by a processor of the management sub-system, prior to emulating (Ice: col. 3, lines 59-67) in order to boot the computer from a floppy drive without changing the native OS and file system (Ice: col. 2, lines 17-28, 41-46). It would have been obvious to one of ordinary skill in the art at the time of the invention to create the method as taught by Klimenko to include the emulation of a floppy drive as taught by Ice in order to boot the computer from the floppy drive leaving the native OS and file system unchanged.

**Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable by U.S. Patent No. 5,887,164 by Gupta in view of U.S. Patent No. 5,974,547 by Klimenko in further view of U.S. Patent No. 5,790,850 by Natu.**

Regarding claim 23, the Gupta and Klimenko reference teaches the system as defined in claim 1. The Gupta reference fails to teach a processor is configured to reboot the managed computer system without accessing a host process of the managed computer system.

However, the Natu reference teaches wherein the processor is configured to reboot the managed computer system without accessing a host processor of the managed computer system (Natu: col. 1, lines 5-13; col. 2, lines 12-15, 57-63) to provides redundancy in case one CPU fails (Natu: col. 1, lines 5-13).

It would have been obvious at the time of the invention to one of ordinary skill in the art to create the system of a processor with memory coupled to a managed computer system as taught by Gupta and Klimenko to include a processor to reboot the managed computer system as taught by Natu in order to provide redundancy in case one CPU fails (col. 1, lines 5-13).

### **Response to Arguments**

Applicant's arguments filed in the amendment filed 2/21/06, have been fully considered but are moot in view of new grounds of rejection. The reasons are set forth below.

**Applicant's invention as claimed:**

**Remarks**

Applicant has three independent claims. In claim 1, the amendment is directed to changing the type of memory in which the bootable image is stored. In claim 11, the amendment broadens the claim language and is directed to an architectural change. In claim 17, the amendment is adding specific architecture to the claimed system.

**Conclusion**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin R. Bruckart whose telephone number is (571) 272-3982. The examiner can normally be reached on 8:00-5:30PM with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on (571) 272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Benjamin R Bruckart  
Examiner  
Art Unit 2155  
brb

  
SALEH NAJJAR  
SUPERVISORY PATENT EXAMINER